

XVI.—*Note on Long-faced Birds.*

By W. K. PARKER, F.R.S.

IN the skull of the Curlew (*Numenius arquata*) there is a structural advance upon that of the typical Plovers, besides the special elongation of the face for the purposes of exploration or probing. Now this elongation of the face, which is relatively much less than in certain Humming-birds, takes place much earlier than in them; for as Dr. Shufeldt has shown*, in Humming-birds, the face at the time of hatching is but little more elongated than in the ripe embryo of an ordinary singing-bird. In the embryo of *Numenius arquata*, one third ripe, the skull is longer than the rostrum; but in embryos three fourths ripe the skull and rostrum are equal in length; they are each 20 millim. long. The rostrum has not yet begun to be arcuate†. So that in ripe embryos the rostrum is far advanced in growth. The same thing takes place in the Kiwi (*Apteryx australis*), as the observations of my son show. These facts, added to what I have found in the Guillemot, namely, that its endo-cranium undergoes an actual shortening in the egg, seem to me to prove that long-faced birds are not a new thing on the earth. Nevertheless, I do think that relatively to these terrestrial, wading, and water-birds, the long-faced forms of the Humming-birds are *new*; and that in their case the elongation has taken place correlatively with the remarkable development of the flowers of certain neotropical plants. Mud-banks, the home of innumerable Annelids and other invertebrate creatures, the feeding-grounds of wading and water-birds, are not things of yesterday; flowers with their nectary at the bottom of a very long tubular corolla must be a relatively modern modification.

* In an unpublished paper.

† These embryos were the gift of Prof. A. Newton, F.R.S.